CLAIMS:

1. A resonator filter structure (10), in particular a radio frequency (RF) filter structure, arranged on a substrate for providing a passband which can be defined by frequencies as a center frequency f_C, a lower cut off frequency f_L, a upper cut off frequency f_U comprising between an input port (1) and an output port (2) at least a lattice type filter section (20) having two lattice branch types being a lattice branch and a series branch wherein resonator elements (20-1, 20-2, 20-3, 20-4) are arranged in said series branches as series arms having a resonance frequency f_{X1R} and an anti-resonance frequency f_{X1A} and wherein resonator elements(20-1, 20-2, 20-3, 20-4) are arranged in said lattice branches as lattice arms having a resonance frequency f_{X2R} and a anti-resonance frequency f_{X2A}, characterized in that all of said resonator elements (20-1, 20-2, 20-3, 20-4) within said lattice type filter section (20) have substantially equal resonance frequencies, i.e. $f_{X1R} \approx f_{X2R}$, and substantially equal anti-resonance frequencies, i.e. $f_{X1A} \approx f_{X2A}$; and there are means (30-1, 30-2) for moving at least one of said anti-resonance frequencies f_{X1A} or f_{X2A}, respectively, or one of said resonance frequencies f_{X1R} and f_{X2R}, respectively, of the resonator elements in one of said lattice branch types.

2. The resonator filter structure according to claim 1, wherein said means for moving at least one of said anti-resonance frequencies f_{X1A} or f_{X2A}, respectively, are parallel capacitances C (30-1, 30-2) connected in parallel to each of said series arm resonators or to each of said lattice arm resonators (20-2, 20-3), respectively.

3. The resonator filter structure according to claim 1, wherein said means for moving at least one of said resonance frequencies f_{X1R} or f_{X2R}, respectively, are series capacitances C connected in series to each of said series arm resonators or to each of said lattice arm resonators, respectively.

4. The resonator filter structure according to one of the claims 1 to 3, wherein said resonator elements (20-1, 20-2, 20-3, 20-4) are acoustic wave resonator elements,

preferably bulk acoustic wave (BAW) resonator elements or surface acoustic wave (SAW) resonator elements.

5. The resonator filter structure according to claim 4, wherein said BAW resonator elements comprise at least a piezoelectric layer having an equal thickness in all of said BAW resonator elements.

6. The resonator filter structure according to claim 5, wherein said piezoelectric layer comprises a layer of piezoelectric material such as aluminum nitride (AlN) and/or zinc oxide (ZnO) and at least an optional additional dielectric layer such as silicon oxide (SiO_2).

7. The resonator filter structure according to one of the claims 4 to 6, wherein a total capacitance of all branches of said lattice type filter section is substantial equal at least outside said passband.

8. The resonator filter structure according to claim 7, wherein said parallel capacitances C (30-1, 30-2) corresponds with

$$C = (1 - x) \cdot A \cdot C_{AREA},$$

wherein A is an area on said substrate of one of said BAW resonators in one of said branch types of said BAW lattice filter section wherein said area has a capacitance per area C_{AREA} and x is an fraction of said area A, wherein $x \cdot A$ is an area of one of said BAW resonators of said respective other branch type of said BAW lattice filter section.

9. The resonator filter structure according to one of the preceding claims, wherein means for impedance matching (40a, 40b) are connected at least to one of said input port and said output port.

10. The resonator filter structure according to claim 8, wherein said means for impedance matching (40a, 40b) comprise discrete inductive elements and/or discrete capacitive elements (41, 42-1, 42-2) which are connected in series and/or in parallel to said respective port.

11. The resonator filter structure according to one of the preceding claims, wherein at least at one of said input port and output port signal guidance is balanced.

12. The resonator filter structure according to claim 11, wherein at one of said input port and output port signal guidance is unbalanced.